

AMENDMENTS TO THE CLAIMS

1-17. (Cancelled)

18. (Previously Presented) The method of claim 19 wherein driving the punches comprises penetrating the punches into the fiber-cement panel along the full length of the fiber-cement panel in one stroke of the punches.

19. (Previously Presented) A method of fabricating a fiber-cement soffit, comprising:

providing a cured fiber-cement panel having a length, a width and a thickness;

placing the fiber-cement panel between a punch assembly and a support assembly, the punch assembly having a punch plate and a plurality of punches coupled to the punch plate, and the support assembly having a support plate with a plurality of holes;

driving the punches into and through at least a portion of the thickness of the fiber-cement panel to form a plurality of apertures in the fiber-cement panel by ejecting plugs from the fiber-cement panel through the holes in the support plate; and

wherein the fiber-cement panel has a thickness of approximately 0.25-0.31625 inch, and wherein driving the punches comprises penetrating the punches into the panel to a depth of approximately 0.0625-0.1875 inch without passing the punches completely through the panel and thereby producing a ventilated fiber-cement soffit.

20. (Previously Presented) The method of claim 19 wherein:

the punch assembly includes a flat punch plate and the plurality of punches project from the punch plate, the punches being spaced apart from one another by approximately 0.5-1.0 inch, and the punches having a first end attached to the punch plate, a second end opposite the first end with a contact face, and a first diameter of approximately 0.11-0.25 inch;

the support assembly includes a flat support plate and the plurality of holes extend through the support plate, each hole being aligned with a corresponding punch projecting from the punch plate, and the holes having a second diameter of approximately 0.18-0.39 inch to provide a radial punch/hole clearance between the punches and holes of approximately 0.04-0.07 inch; and

driving the punches comprises moving the punches toward the holes and into the fiber-cement panel until the punches eject the plugs from the panel.

21. (Previously Presented) The method of claim 19 wherein:

the punch assembly includes a flat punch plate and the plurality of punches project from the punch plate, the punches being spaced apart from one another by approximately 0.5-1.0 inch, and the punches having a first end attached to the punch plate, a second end opposite the first end with a contact face, and a first diameter of approximately 0.11-0.25 inch;

the support assembly includes a flat support plate and the plurality of holes extend through the support plate, each hole being aligned with a corresponding punch projecting from the punch plate, and the holes having a second diameter of approximately 0.18-0.39 inch to provide a radial punch/hole clearance between the punches and holes of approximately 4%-30% of the second diameter of the holes; and;

driving the punches comprises moving the punches toward the holes and into the fiber-cement panel until the punches eject the plugs from the panel.

22. (Previously Presented) The method of claim 19 wherein:

the punch assembly includes a flat punch plate and the plurality of punches project from the punch plate, the punches being spaced apart from one another by approximately 0.5-1.0 inch, and the punches having a first end attached to the punch plate, a second end opposite the first end with a contact face, and a first diameter of approximately 0.11-0.25 inch;

the support assembly includes a flat support plate and the plurality of holes extend through the support plate, each hole being aligned with a corresponding punch projecting from the punch plate, and the holes having a second diameter of approximately 0.18-0.39 inch to provide a radial punch/hole clearance between the punches and holes of approximately 4%-40% of a thickness of the fiber-cement panel; and

driving the punches comprises moving the punches toward the holes and into the fiber-cement panel until the punches eject the plugs from the panel.

23. (Cancelled)

24. (Previously Presented) The method of claim 25 wherein the fiber-cement panel has a length, a width and a thickness, and wherein driving the punches comprises penetrating the punches into the fiber-cement panel along the length of the fiber-cement panel in one punch stroke.

25. (Previously Presented) A method of fabricating a fiber-cement soffit, comprising:

providing a cured fiber-cement panel having a thickness, and the fiber-cement panel comprising cement, cellulose material, and a binder;

placing the fiber-cement panel between a punch assembly and a support assembly, the punch assembly having a punch plate and a plurality of punches coupled to the punch plate, and the support assembly having a support plate with a plurality of holes;

driving the punches through at least a portion of the thickness of the fiber-cement panel to form apertures in the fiber-cement panel by ejecting plugs from the fiber-cement panel through the holes in the support plate;

withdrawing the punches from the fiber-cement panel without delaminating the fiber-cement panel at the apertures; and

wherein the fiber-cement panel has a thickness of approximately 0.25-0.31625 inch, and wherein driving the punches comprises penetrating the punches into the panel to a depth of approximately 0.0625-0.1875 inch without passing the punches completely through the panel and thereby producing a ventilated fiber-cement soffit.

26. (Previously Presented) The method of claim 25 wherein:

the punch assembly includes a flat punch plate and the plurality of punches project from the punch plate, the punches being spaced apart from one another by approximately 0.5-1.0 inch, and the punches having a first end attached to the punch plate, a second end opposite the first end with a contact face, and a first diameter of approximately 0.11-0.25 inch;

the support assembly includes a flat support plate and the plurality of holes extend through the support plate, each hole being aligned with a corresponding punch projecting from the punch plate, and the holes

having a second diameter of approximately 0.18-0.39 inch to provide a radial punch/hole clearance between the punches and holes of approximately 0.04-0.07 inch; and
driving the punches comprises moving the punches toward the holes and into the fiber-cement panel until the punches eject the plugs from the panel.

27. (Previously Presented) The method of claim 25 wherein:

the punch assembly includes a flat punch plate and the plurality of punches project from the punch plate, the punches being spaced apart from one another by approximately 0.5-1.0 inch, and the punches having a first end attached to the punch plate, a second end opposite the first end with a contact face, and a first diameter of approximately 0.11-0.25 inch;
the support assembly includes a flat support plate and the plurality of holes extend through the support plate, each hole being aligned with a corresponding punch projecting from the punch plate, and the holes having a second diameter of approximately 0.18-0.39 inch to provide a radial punch/hole clearance between the punches and holes of approximately 4%-30% of the second diameter of the holes; and
driving the punches comprises moving the punches toward the holes and in to the fiber-cement panel until the punches eject the plugs from the panel.

28. (Previously Presented) The method of claim 25 wherein:

the punch assembly includes a flat punch plate and the plurality of punches project from the punch plate, the punches being spaced apart from one another by approximately 0.5-1.0 inch, and the punches having a first end attached to the punch plate, a second end opposite the first end with a contact face, and a first diameter of approximately 0.11-0.25 inch;

the support assembly includes a flat support plate and the plurality of holes extend through the support plate, each hole being aligned with a corresponding punch projecting from the punch plate, and the holes having a second diameter of approximately 0.18-0.39 inch to provide a radial punch/hole clearance between the punches and holes of approximately 4%-40% of a thickness of the fiber-cement panel; and driving the punches comprises moving the punches toward the holes and into the fiber-cement panel until the punches eject the plugs from the panel.

29. (Previously Presented) The method of claim 25 wherein withdrawing the punches from the fiber-cement panel comprises pressing resilient biasing members against the fiber-cement panel adjacent to at least a subset of the plurality of punches when the punches penetrate into fiber-cement panel.

30. (Previously Presented) The method of claim 25, further comprising: providing a plurality of biasing elements coupled to the punch assembly, the biasing elements being compressible, resilient members projecting from the punch plate adjacent to a punch; and withdrawing the punches from the fiber-cement panel by pressing the biasing elements against the fiber-cement panel proximate to at least a subset of the punches as the punches penetrate the fiber-cement panel.

31. (Previously Presented) A method of fabricating a fiber-cement soffit, comprising:
providing a cured fiber-cement panel;
engaging an active drive assembly with the fiber-cement panel, wherein the active drive assembly has a first drive member contacting one surface of

the fiber-cement panel and a second drive member opposing the first drive member contacting an opposite surface of the fiber-cement panel;
moving the first and second drive members such that the drive members feed the fiber-cement panel between a punch assembly and a support assembly, the punch assembly having a punch plate and a plurality of punches projecting from the punch plate, and the support assembly having a support plate with a plurality of holes; and
forming a plurality of apertures in the fiber-cement panel by driving the punches through only a portion of the thickness of the fiber-cement panel without passing the punches completely through the panel and thereby producing a ventilated fiber-cement soffit.

32. (Previously Presented) The method of claim 31 wherein the fiber-cement panel has a thickness of approximately 0.25-0.31625 inch, and wherein driving the punches comprises penetrating the punches into the panel to a depth of approximately 0.0625-0.1875 inch without passing the punches completely through the panel.

33. (Previously Presented) The method of claim 31 wherein:
the punch assembly includes a flat punch plate and the plurality of punches project from the punch plate, the punches being spaced apart from one another by approximately 0.5-1.0 inch, and the punches having a first end attached to the punch plate, a second end opposite the first end with a contact face, and a first diameter of approximately 0.11-0.25 inch;
the support assembly includes a flat support plate and the plurality of holes extend through the support plate, each hole being aligned with a corresponding punch projecting from the punch plate, and the holes having a second diameter of approximately 0.18-0.39 inch to provide a

radial punch/hole clearance between the punches and holes of approximately 0.04-0.07 inch; and
driving the punches comprises moving the punches toward the holes and into the fiber-cement panel until the punches eject the plugs from the panel.

34. (Previously Presented) The method of claim 31 wherein:

the punch assembly includes a flat punch plate and the plurality of punches project from the punch plate, the punches being spaced apart from one another by approximately 0.5-1.0 inch, and the punches having a first end attached to the punch plate, a second end opposite the first end with a contact face, and a first diameter of approximately 0.11-0.25 inch;
the support assembly includes a flat support plate and the plurality of holes extend through the support plate, each hole being aligned with a corresponding punch projecting from the punch plate, and the holes having a second diameter of approximately 0.18-0.39 inch to provide a radial punch/hole clearance between the punches and holes of approximately 4%-30% of the second diameter of the holes; and
driving the punches comprises moving the punches toward the holes and into the fiber-cement panel until the punches eject the plugs from the panel.

35. (Previously Presented) The method of claim 31 wherein:

the punch assembly includes a flat punch plate and the plurality of punches project from the punch plate, the punches being spaced apart from one another by approximately 0.5-1.0 inch, and the punches having a first end attached to the punch plate, a second end opposite the first end with a contact face, and a first diameter of approximately 0.11-0.25 inch;
the support assembly includes a flat support plate and the plurality of holes extend through the support plate, each hole being aligned with a

corresponding punch projecting from the punch plate, and the holes having a second diameter of approximately 0.18-0.39 inch to provide a radial punch/hole clearance between the punches and holes of approximately 4%-40% of a thickness of the fiber-cement panel; and driving the punches comprises moving the punches toward the holes and into the fiber-cement panel until the punches eject the plugs from the panel.

36. (Original) The method of claim 31 wherein withdrawing the punches from the fiber-cement panel comprises pressing resilient biasing members against the fiber-cement panel adjacent to at least a subset of the plurality of punches when the punches penetrate into fiber-cement panel.

37. (Original) The method of claim 31, further comprising:
providing a plurality of biasing elements coupled to the punch assembly, the biasing elements being compressible, resilient members projecting from the punch plate adjacent to a punch; and
withdrawing the punches from the fiber-cement panel by pressing the biasing elements against the fiber-cement panel proximate to at least a subset of the punches as the punches penetrate the fiber-cement panel.

38. (Previously Presented) A method of fabricating a fiber-cement soffit, comprising:
providing a cured fiber-cement panel having a thickness of approximately 0.25-0.625 inch;
placing a fiber-cement panel between a punch assembly and a support assembly so that a first side of the panel faces the punch assembly and a second side of the panel faces the support assembly, the punch assembly having

a punch plate and a plurality of punches coupled to the punch plate, and the support assembly having a support plate with a plurality of holes; and driving the punches through only a portion of the thickness of the fiber-cement panel to form a plurality of tapered openings in the fiber-cement panel and thereby producing a ventilated fiber-cement soffit.

39. (Previously Presented) The method of claim 38 wherein driving the punches comprises passing the punches along a punch stroke path to an intermediate depth of the fiber-cement panel without passing the punches completely through the panel and ejecting plugs from the panel in the direction of the punch stroke.

40. (Cancelled)

41. (Previously Presented) The method of claim 38 wherein:
the punches are arranged in an array and have a diameter of approximately 0.11-0.25 inch, and the holes are arranged in a corresponding array and have a diameter of approximately 0.18-0.39 inch to provide a radial punch-hole clearance between the punches and the holes of approximately 0.04-0.07 inch; and
driving the punches comprises moving the punches along a punch stroke into the fiber-cement panel until the punches eject plugs from the panel in the direction of the punch stroke.

42. (Previously Presented) A method of fabricating fiber-cement soffit, comprising:
placing a cured fiber-cement panel between a punch assembly and a support assembly so that a first side of the panel faces the punch assembly and a second side of the panel faces the support assembly, the punch assembly

having a punch plate and a plurality of punches having a first cross-sectional dimension coupled to the punch plate, and the support assembly having a support plate with a plurality of holes having a second cross-sectional dimension larger than the first cross-sectional dimension of the punches; and

driving the punches through only a portion of the fiber-cement panel to form a plurality of openings in the fiber-cement panel that have the first dimension of the punches at the first side of the panel and the second dimension of the holes at the second side of the panel and thereby producing a ventilated fiber-cement soffit.

43. (Previously Presented) The method of claim 42 wherein driving the punches comprises passing the punches along a punch stroke path to an intermediate depth of the fiber-cement panel without passing the punches completely through the panel and ejecting plugs from the panel in the direction of the punch stroke.

44. (Cancelled)

45. (Previously Presented) The method of claim 42 wherein:
the punches are arranged in an array and have a diameter of approximately 0.11-0.25 inch, and the holes are arranged in a corresponding array and have a diameter of approximately 0.18-0.39 inch to provide a radial punch-hole clearance between the punches and the holes of approximately 0.04-0.07 inch; and
driving the punches comprises moving the punches along a punch stroke into the fiber-cement panel until the punches eject plugs from the panel in the direction of the punch stroke.

46. (Previously Presented) The method of claim 42 wherein:

a clearance between the holes in the support plate and the punches is approximately between 4%-30% of the second dimension of the holes; and

driving the punches comprises moving the punches along a punch stroke into the fiber-cement panel until the punches eject plugs from the panel in the direction of the punch stroke.

47. (Previously Presented) The method of claim 42 wherein:

a clearance between the holes in the support plate and the punches is approximately between 4%-40% of a thickness of the fiber-cement panel; and

driving the punches comprises moving the punches along a punch stroke into the fiber-cement panel until the punches eject plugs from the panel in the direction of the punch stroke.

48. (Previously Presented) The method of claim 42 wherein:

a clearance between the holes in the support plate and the punches is approximately between 0.04-0.07 inch; and

driving the punches comprises moving the punches along a punch stroke into the fiber-cement panel until the punches eject plugs from the panel in the direction of the punch stroke.

49. (Previously Presented) A method of fabricating fiber-cement soffit, comprising:

providing a cured fiber-cement panel having a length, a width, and a thickness, wherein the thickness is approximately 0.25-0.625 inch;

placing the fiber-cement panel between a punch assembly and a support assembly so that a first side of the panel faces the punch assembly and a second side of the panel faces the support assembly, the punch assembly having a punch plate and a plurality of punches having a first cross-sectional dimension coupled to the punch plate, and the support assembly having a support plate with a plurality of holes having a second cross-sectional dimension larger than the first cross-sectional dimension of the punches;

driving the punches along a punch stroke through at least a portion of the thickness of the fiber-cement panel to form a plurality of openings in the fiber-cement panel that have the first dimension of the punches at the first side of the panel and the second dimension of the holes at the second side of the panel; and

pressing a compressible biasing element against the first side of the fiber-cement panel as the punches move along the punch stroke and thereby producing a ventilated fiber-cement soffit.

50. (Previously Presented) The method of claim 49 wherein driving the punches comprises punching holes into the fiber-cement panel along a full length of the panel in one punch stroke.

51. (Previously Presented) The method of claim 49 wherein driving the punches comprises passing the punches completely through the panel.

52. (Previously Presented) The method of claim 49 wherein:
the punches are arranged in an array and have a diameter of approximately 0.11-0.25 inch, and the holes are arranged in a corresponding array and have a diameter of approximately 0.18-0.39 inch to provide a radial punch-

hole clearance between the punches and the holes of approximately 0.04-0.07 inch; and

driving the punches comprises moving the punches into the fiber-cement panel to form openings having a dimension at the first side of the panel of approximately 0.11-0.25 inch.

53. (Previously Presented) The method of claim 49 wherein:

a clearance between the holes in the support plate and the punches is approximately between 4%-30% of the second dimension of the holes; and

driving the punches comprises moving the punches into the fiber-cement panel to form openings having a first dimension at the first side of the panel and a second dimension larger than the first dimension at the second side of the panel.

54. (Previously Presented) The method of claim 49 wherein:

a clearance between the holes in the support plate and the punches is approximately between 4%-40% of a thickness of the fiber-cement panel; and

driving the punches comprises moving the punches into the fiber-cement panel to form openings having a first dimension at the first side of the panel and a second dimension larger than the first dimension at the second side of the panel.

55. (Previously Presented) The method of claim 49 wherein:

a clearance between the holes in the support plate and the punches is approximately between 0.04-0.07 inch; and

driving the punches comprises moving the punches into the fiber-cement panel to form openings having a first dimension at the first side of the panel and a second dimension larger than the first dimension at the second side of the panel.

56-81. (Cancelled)